Model 613 Specifications

Nominal speed 613E	**3,100 RPM**
Nominal RCF 613E	**1,160 x g**
Nominal speed 613D	**3,325 RPM**
Nominal RCF 613D	**1,330 x g**
Max. Volume	**90mL (6 x 15 mL)**
Protection Breaker (613D only)	**4 amp, resettable**
Operating Voltage	**115 Volts**
Operating Frequency	**60 Hz**
Max. Power	**120 watts**
Height	**11 inches (27.9 cm)**
Diameter	**9.75 inches (24.8 cm)**
Weight	**12 lb.**

Replacement Parts:

Part No.	Description
7724037	Rubber foot
7760002	Power cord
7751069	Lid Switch, Model 613D
7722027	Timer, mechanical
7786047	Rotor, 1936 six-place polymer
7735050	Motor, 115 VAC, 613E
7735051	Motor, 115 VAC, 613D
7714102	Latch, Pawl, lid
7712315	Lid
7724071	Hinge, friction
7732004	Seal, lid gasket
7713024	Tube holder, green, for 75mm tubes
7713019	Tube holder, red, for 100mm tubes
7713026	Tube holder, black, for 125mm tubes
1525	Test Tube Cushions

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THE DRUCKER CO.
Reliability in Laboratory Centrifuges Since 1932

Operator's Manual

Model **613**
Laboratory Centrifuge

Rev. 6.0

Installation and Operation Manual

Available Models:

613E: Has a 30 minute mechanical timer.

613D: Has a 30 minute mechanical timer, protective circuit breaker and a lid safety switch that cuts power to the motor if the lid latch is not secure. The 613D also features a higher RPM motor resulting in increased speed and force.

Performance / Calibration:

It is recommended that your Model 613 centrifuge be calibrated at least every 6 months. The max speed for the 613E should fall between 3000 and 3200 RPM, this will give a separation force of 1090 - 1240 xg. The max speed of the 613D should fall between 3250 and 3400, this will give a separation force of 1275 - 1400 xg.
A phototachometer is suggested to determine RPM.

Accessories:

Each model 613 centrifuge comes standard with a 6-place, 45-degree angled rotor and six (6) test tube holders for use with both 15mL and 10mL test tubes. Six (6) test tube cushions, (part no. 1525), are included for spinning 10mL test tubes (12mm x 100mm); 15mL test tubes, (16mm x 125mm), do not require test tube cushions. Optional test tube holders are available for 10mL (100mm) and 5mL (75mm) test tubes that require no tube cushions.

Environmental Conditions: This centrifuge is not intended for outside use or for use in extreme environmental conditions. Any use other than the manufacturer's suggested usage may impair the protection provided by the unit.

Installation and Setup:

1. Unpack the centrifuge and inspect for any possible shipping damage. If the unit appears to be damaged, contact The Drucker Company immediately.
2. Place the centrifuge on a sturdy work surface and verify that there are no loose objects inside. Position the unit so that the timer is easily accessible.
3. If you intend to spin 100mm tubes or smaller, place one (1) 1525 cushion in the bottom of each tube holder. Place the small end in first. (If you are using 125mm (15mL) test tubes, no cushions are required.)
4. Verify that the Timer is in the "Off" position and plug the line cord into an approved and properly grounded 115 VAC outlet, (see "Safety", section 2)
5. Turn the timer to ten minutes. If there is a smooth whirring sound and the unit accelerates with little or no vibration, your Drucker centrifuge is ready to operate. If there are loud and unusual sounds, or if you experience excessive vibration, ***do not operate.*** Contact your dealer or the Drucker Company.

Safety:

1. Tube Holders: It is recommended that the tube holders be replaced after 24 months of use.

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Safety (cont.):

2. ***Safety Disconnect:*** Make certain that the centrifuge is plugged into a 110VAC outlet that is always within reach as the line cord is the means of emergency disconnection.

3. ***Keep the Tube Holders Clean:*** Small glass fragments left in the tube holders after a tube breakage may adhere to the next test tube inserted in that holder. When this tube is handled these fragments may puncture protective gloves and lacerate the operator's fingers or hand. Fragments left imbedded in the tube cushions may also provide stress points on subsequent tubes and result in additional breakage. If a tube breakage occurs, carefully remove the tube holder; properly dispose of the sample and tube fragments; thoroughly clean both the inside and outside of the tube holder; insert a new tube cushion if necessary, and replace the tube holder in the rotor.

Care And Preventative Maintenance:

With proper care and maintenance The Drucker 613 centrifuge will provide years of laboratory service. For proper care, the following steps should be taken:

1. ***Provide Adequate Ventilation:*** For cooling purposes the model 613 draws air in through louvers in the bottom of the centrifuge. The centrifuge should be placed on a hard smooth surface for good air circulation.

2. ***Always Spin Balanced Loads:*** Make certain that all tube holders are filled with equal weight samples or water filled tubes. The 613 has a unique counter balanced motor mounting design which, along with its all steel construction and rubber suction feet, produces excellent vibration dampening. However, out-of-balance loads may break glass test tubes and may produce unsatisfactory separation results. Proper sample balancing will improve sample separation and extend the life of the centrifuge.

3. ***Clean The Inside Of The Centrifuge:*** The 613 centrifuge is designed with a removable rotor chamber cover (Top Shell) to permit servicing and cleaning of the inside of the rotor chamber. Every six months, or whenever there is a tube breakage that allows samples to enter the rotor chamber area, it is advisable to remove this cover and clean the inside of the centrifuge as follows:

   Model 613D: Unplug the line cord, remove the test tube holders, close and latch the lid and remove the top shell. Note: the model 613D has electrical wires running from the inside of the top of the centrifuge into the base; take precautions not to over extend these electrical wires. Lay the top shell upside down on the lid, adjacent to the centrifuge base. Disinfect and clean the inside of the centrifuge. To reassemble, reinsert the tube holders in the rotor; slide the top shell over the motor support plate making certain that the black plastic cover strip is between the top shell and the motor support plate; screw the top shell to the motor support plate using the original or identical screws.

   Model 613E: Remove the white top shell, disinfect and clean the inside of the centrifuge, and then reattach the top shell to the motor support plate.

Caution: Do Not Fully Submerge In Water!

4. ***Motor and Electrical Maintenance:*** The motor of the 613 is a brushless induction type with an oil impregnated sleeve bearing. The motor should not need servicing for the life of the centrifuge. The electrical components are selected for high reliability and should not need service. ***If any of these parts should fail they must be repaired or replaced by a qualified service technician.***